

I CLAIM:

1. A system for forming an optical image comprising:
a screen on which is displayed an image to be reproduced
on an image display plane;

means for optically transmitting said image on said
screen in the form of a plurality of blocks to an image display
plane;

a block deflecting system associated with said display
plane for receiving said plurality of optically transmitted blocks
and displaying them in the proper order on said image display
plane.

2. A system as in claim 1 wherein said block deflecting
system comprises an image multiplying matrix which receives the
optically transmitted image blocks.

3. A system as in claim 2 wherein said image multiplying
matrix comprises a space time modulator formed by an array
of controllable light modulating elements.

4. A system as in claim 3 wherein said image multiplying
matrix comprises an array of coordinated light dividing
elements to direct the light of the received optically transmitted
blocks to be displayed on said image display plane.

5. A system as in claim 1 wherein said block deflecting system comprises an acoustic-optical deflector.

6. A system as in claim 5 wherein a said acoustic-optical deflector includes a visual display element as its output.

7. A system as in claim 1 wherein said screen comprises semiconductor laser devices and a means for producing a scanning cathode ray to energize said laser device to generate said image.

8. A system as in claim 3 further comprising a holograph generator for producing the image on said screen;

 said block deflecting system including a focusing means to focus the blocks of said holographic image for display on said image display plane.

9. A system as in claim 1 used for recording the image on said screen, wherein said image display plane comprises an array of elements that receives the light information of said plurality of optically transmitted blocks and a light image formed by outer objects and converts the light information into electrical signals for recording.

10. A method for forming an optical image, comprising:

displaying fragments of an image to be reproduced on an image screen;

optically transmitting said fragments of an image to an image display plane; and

displaying said plurality of optically transmitted fragments in the proper order on said image display plane.

11. A method as in claim 10 wherein said step of displaying comprises deflecting the optically transmitted blocks onto said image display plane.

12. A method as in claim 11 wherein said deflecting step comprises applying the optically transmitted block to an image multiplying matrix.

13. A method as in claim 12 wherein said image multiplying matrix comprises a space time modulator formed by an array of light modulating elements and the deflecting of the optically transmitted blocks onto said image display plane is accomplished by controlling said light modulating elements.

14. A method as in claim 12 wherein said array of light modulating elements comprise a plurality of mirrors, and said displaying step comprises receiving said plurality of optically transmitted blocks as light rays at said array of mirrors, and

controlling the reflectivity of said array of mirror for directing selected reflected rays to said image plane.

15. A method as in claim 12 wherein said image multiplying matrix comprises an array of coordinated light dividing elements for receiving said optically transmitted blocks and said displaying step comprises controlling said light dividing elements to direct the light of the received optically transmitted blocks to be displayed on said image display plane.

16. A method as in claim 13 wherein said image multiplying matrix comprises an array of acoustic-optical deflectors and said displaying step comprises by controllably actuating said acoustic-optical deflectors to deflect the received light rays of said optically transmitted blocks to said image display plane.

17. A method as in claim 16 further comprising the step of providing each said acoustic-optical deflector with a visual display element as its output and forming the visual display elements of said array of acoustic-optical deflectors on said image display plane.

18. A method as in claim 10 wherein said image screen comprises an array of semiconductor laser devices and further

comprising the step of scanning said array with a cathode ray to energize said laser device to generate said image.

19. A method for forming an optical image, comprising:
displaying a scanning raster on an image screen;
optically transmitting said raster to an image display plane subdivided into an array of blocks;

multiplying displaying raster into components, each for each block of an image display plane;

independently modulating each component in each block of an image display plane to form fragments of image to be displayed; and

displaying said plurality of fragments on said image display plane.

20. A method as in claim 19 wherein the step of displaying the said plurality of fragments on said image display plane comprises generating said image as a holographic image.

21. A method as in claim 19 for recording the image on said screen, comprising:

optically transmitting an outer image to be recorded to an image display plane of an array of elements that convert light energy into an electrical voltage;

deflecting the light information of said plurality of an image screen onto said image display plane, and

converting the light information received on said image display plane into electrical voltage signals for recording.

22. A method as in claim 19 wherein said image displayed on said display means are displayed in fragments and said fragments are optically transmitted to said image display plane.

23. A method for forming an optical image, comprising:
displaying a scanning raster on an image screen;
optically transmitting said raster to an image display plane subdivided into an array of blocks;

multiplying the raster to be displayed into components, each for each block of said image display plane;

modulating each component in each block to form fragments of the hologram to be formed on an image display plane; and

forming a hologram, further generated as holographic image, on said image display plane by focusing fragments of said hologram on said image display plane.

24. A method for image forming as in claim 23 used for producing a hard copy of electronically formed holographic image, wherein the step of generating the holographic image is succeeded by a step of projecting formed image on a photosensitive material

and forming a hologram on that material, that is further developed in a customary developing technique.

